



SEQUENCE LISTING

<110> LIN, CHIH-FENG

<120> LACTOBACILLUS RHAMNOSUS STRAIN AND USES THEREOF

<130> 089048/0224

<140> 09/686,067

<141> 2000-10-10

<150> 089115288

<151> 2000-07-29

<160> 10

<170> PatentIn Ver. 2.1

<210> 1

<211> 776

<212> DNA

<213> Lactobacillus rhamnosus

<400> 1

tatacactgg	tacctcccta	agtgggatac	attgaaacaa	tctatccgca	taatcaagac	60
cgcattgtctt	gctaagatgc	gtaactatcg	ctttggatga	ccccgcgtat	agctagtgtg	120
aagtaacgct	caccaagcaa	tgatgctagc	caactaagtt	gatcgccaca	ttggactaaa	180
cacggcccaa	actctacgga	ggcagcagta	ggaatcttcc	acaatggacg	caagtctgat	240
ggagcaacgc	cgcgtgactg	aagaaggctt	tcggggcgta	aaactctgtt	gttggagaag	300
aatggtcggc	agagtaactg	ttgtcggcgt	gacgggtatcc	aaccagaaaag	ccacggctaa	360
ctcagtgcc	gcagccgcgg	taatacgtag	gtggcaagcg	ttatccggat	ttattgggcy	420
taaagcgagc	gcaggcggtt	ttttaactct	gatgtgaaag	ccctcggctt	aaccgaggaa	480
gtgcatcgga	aactgggaaa	cttgagtaca	gaagaggaca	gtggaactcc	atgtgtagcg	540
gtgaaatgcg	tagatatatg	gaagaacacc	agtggcgaag	gcggctgtct	ggctctgtaac	600
tgacgctgag	gctcgaaagc	atgggtagcg	aacaggatta	gataccctgg	tagtccatgc	660
cgtaaacgat	gaatgctagg	tggttgaggg	tttccgccct	tcagtgcgcg	actaacgc	720
taagcattcc	gcctggggag	tacgaccgca	aggttgaaac	tcaaaggaat	tgacgg	776

<210> 2

<211> 581

<212> DNA

<213> Lactobacillus rhamnosus

<400> 2

ttgtacacac	cgcccgtcac	accatgagag	tttgtaacac	ccgaagccgg	tgccgtaacc	60
cttttaggga	gcgagccgtc	taagggtggga	caaatagatta	gggtgaagtc	gtaacaagg	120
agccgtagga	gaacctgcgg	ctggatcacc	tcctttctaa	ggaaacagac	tgaaagtctg	180
acggaaacct	gcacacacga	aactttgttt	agttttgagg	ggattaccct	caagcacct	240
agcgggtgcg	actttgttct	ttgaaaactg	gatatcattg	ttgtaaatgt	tttaaattgc	300
cgagaacaca	gcgtatttgt	atgagtttct	aataatagaa	attcgcatcg	cataaccgct	360
gacgcaagtc	agtaccaggt	aagttacaaa	gggcgcacgg	tggtatgcctt	ggcactagga	420
gccgatgaag	gacggaacta	ataccgatat	gcttcgggga	gctataagta	agctttgatc	480
cggagatttc	cgaatggggg	aacccagtac	acatcagtgt	attgcctgca	agtgaatata	540
tagcttgttg	gcggcagacg	cgggggaactg	aaacatctaa	g		581

<210> 3
 <211> 589
 <212> DNA
 <213> *Lactobacillus rhamnosus*

<400> 3
 cttgtacaca ccgcccgtca caccatgaga gtttgtaaca cccgaagccg gtggcgtaac 60
 ctttttaggga gcgagccgtc taagggtggga caaatgatta ggggtgaagtc gtaacaaggt 120
 agccgtagga gaacctgcgg ctggatcacc tcctttctaa ggaaacagac tgaaagtctg 180
 acggaaacct gcacacacga aactttgttt agttttgagg ggatcacctt caagcacctt 240
 aacgggtgcg actttgttct ttgaaaactg gatatcattg tattaattgt tttaaattgc 300
 cgagaacaca gcgtatttgt atgagtttct gaaaaagaaa ttcgcatcgc ataaccgctg 360
 acgcaagtca gtacagggtta agttacaaag ggcgcacggg ggatgccttg gcactaggag 420
 ccgatgaagg acggaactaa taccgatatg cttcggggag ctataagtaa gctttgatcc 480
 ggagatttcc gaatggggga acccagtaca catcagtgtg ttgcttgtca gtgaatacat 540
 agctggccgg cggccagacg cgggggaactg aaacatctaa gtaccgga 589

<210> 4
 <211> 686
 <212> DNA
 <213> *Lactobacillus rhamnosus*

<400> 4
 ccttttctaag gaaacagact gaaagtctga cggaaacctg cacacacgaa actttgttta 60
 gttttgaggg gattaccctc aagcacctta gcgggtgcga ctttgttctt tgaaaactgg 120
 atatcattgt tgtaaatgtt ttaaattgcc gagaacacag gctatttgta tgagtttcta 180
 ataataaaaa ttcgcatcgc ataaccgctg acgcaagtca gtacagggtta agttacaaag 240
 ggcgcacggg ggatgccttg gcactaggag ccgatgaagg acggaactaa taccgatatg 300
 cttcggggag ctataagtaa gctttgatcc ggagatttcc gaatggggga acccagtaca 360
 catcagtgtg ttgcctgcaa gtgaatacat agcttggttg cggcagacgc ggggaactga 420
 aacatctcag taccgcgagg aagagaaaga aaactcgatt cccatagtag cggcgagcga 480
 agtgggaaga gcccaaaccg agaagcttgc ttctcggggt ttaggactg gacattggag 540
 ttaccaaagt tcgacgtagt cgaagtcagc tggaaagctg cgccatagaa ggtgaaagcc 600
 ctgtaaacga aacggcggac tctccgtcca ggatcctgag tacggcgga cactgaaat 660
 tccgtcggaa tccgggagga ccatct 686

<210> 5
 <211> 222
 <212> DNA
 <213> *Lactobacillus rhamnosus*

<400> 5
 ctaaggaaac agactgaaag tctgacggaa acctgcacac acgaaacttt gtttagtttt 60
 gaggggatta ccctcaagca ccctagcggg tgcgactttg ttctttgaaa actggatata 120
 attgttgtaa atgtttttaa ttgccgagaa cacagcgtat ttgtatgagt ttctaataat 180
 agaaattcgc atcgcataac cgctgacgca agtcagtaca gg 222

<210> 6
 <211> 222
 <212> DNA
 <213> *Lactobacillus rhamnosus*

<400> 6
 ctaaggaaac agactgaaag tctgacggaa acctgcacac acgaaacttt gtttagtttt 60
 gaggggatta ccctcaagca ccctagcggg tgcgactttg ttctttgaaa actggatata 120

attgttgtaa atgtttttaa ttgccgagaa cacagcgtat ttgtatgagt ttctaataat 180
 agaaattcgc atcgcataac cgctgacgca agtcagtaca gg 222

<210> 7
 <211> 218
 <212> DNA
 <213> Lactobacillus rhamnosus

<400> 7
 aaggaaacag actgaaagtc tgacggaaac ctgcacacac gaaactttgt ttagttttga 60
 ggggattacc ctcaagcacc ctagcgggtg cgactttgtt ctttgaaaac tggatatcat 120
 tgttgtaa atgtttttaa gccgagaaca cagcgtat ttgtatgagttt ctaataatag 180
 aaattcgc atcgcataaccg ctgacgcaag tcagtaca 218

<210> 8
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Primer

<400> 8
 cccactgctg cctcccgtag gagt 24

<210> 9
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Primer

<400> 9
 tgcattctga tttaattttg 20

<210> 10
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Primer

<400> 10
 ccgtcaattc ctttgagttt 20